

REMARKS

I. Double Patenting

In the Office Action dated September 22, 2004, the Examiner provisionally rejected claims 1-20 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of co-pending Application No. 10/635,277. The Examiner stated that although the conflicting claims are not identical, they are not patentably distinct from each other because the cited co-pending Application teaches all of the basic features of the claimed invention, except dimple contact with respect to temperature and pressure levels. The Examiner further argued that it would appear well within the experimental skills of one having ordinary skill in the art to evaluate temperature and pressure characteristics, since these parameters appear to be the fundamental scope of the invention as claimed. The Examiner further indicated that this is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

In response to the aforementioned rejection under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of co-pending Application No. 10/635,277, the Applicants are therefore submitting herewith a timely filed terminal disclaimer in compliance with 37 CFR 1.321(c). The Applicants therefore submit that the aforementioned rejection to claims 1-20 has been traversed and should be withdrawn.

II. Claim Rejections Under 35 U.S.C. § 102

The Examiner rejected claims 1, 2, 6, 11, 12 and 16 under 35 U.S.C. § 102 as being anticipated by Kurtz et al., hereinafter "Kurtz" (U.S. Patent No. 5,999,082).

Regarding claims 1 and 11, the Examiner argued that Kurtz teaches a sensor element (citing col. 2, line 50 of Kurtz) located on a base 15, a cover (citing col. 3, lines 28-40 of Kurtz) located proximate to the base, wherein the cover comprises a sensor diaphragm 21 and a dimple 20 that forms a part of the cover (citing col. 3, lines 28-40 of Kurtz), wherein the dimple is in contact with the sensor element at all pressure levels and temperatures (citing Fig. 2 of Kurtz).

The Applicants respectfully disagree with this assessment. Applicant's amended claim 1 is directed toward a sensor apparatus comprising a base located proximate to a cover; a sensor element located on said base, wherein said cover and said base form a clearance between said cover and said base; and a sensor diaphragm and a dimple formed from and incorporated inwardly into said cover, wherein said dimple is in intimate contact with said sensor element at all pressure levels and temperatures thereof.

Applicants' amended claim 11 also teaches the step of incorporating a sensor diaphragm and a dimple into said cover, wherein said dimple is formed inwardly into said cover and is in intimate contact with said sensor element at all pressure levels and temperatures thereof. Such features are taught by Applicants' specification and drawings. For example, Applicants note that FIG. 1 of Applicants' specification shows that the dimple 102 is formed inwardly into cover 104.

Additionally, Applicants' FIG. 3 indicates that the dimple 102 is formed inwardly into cover 104 and is in intimate contact with sensor element 106.

The dimple 20 of Kurtz, on the other hand, is not formed inwardly into the cover. Instead, FIG. 2 of Kurtz indicates that dimple 20 extends outward from the cover of Kurtz. In fact, Kurtz points out at col. 3, lines 33-35 that "as also seen in FIG. 2, there is an upward dimple or projection or dome 20 in the metal diaphragm."

Additionally, Applicants note that Kurtz does not teach that the dimple is in intimate contact with the sensor element at all pressure levels and temperatures thereof. FIG. 2 of Kurtz clearly shows that the dome 20 is filled with oil 14. The sensor 10 of Kurtz is located below the oil 14. That is, the oil is located between sensor 10 of Kurtz and dome 20. Therefore, the dome 20 of Kurtz is never in intimate contact with sensor 10 because the oil is located therebetween. This is further evidenced by col. 3, lines 38-39 of Kurtz, which indicates, "The dimple or dome 20 enables the oil positioned above the sensor to increase in thickness." Again, such language indicates that dome 20 of Kurtz is not located in intimate contact with the sensor of Kurtz.

The Applicants remind the Examiner that in order to succeed in a rejection to one or more claims under 35 U.S.C. § 102(a) based on a prior art reference, the prior art reference must disclose all of the limitations and features of the rejected claim or claims. In this case, the Kurtz reference does not teach all of the limitations and features of the Applicants' claims 1 and 11.

Based on the foregoing, the Applicants submit that the rejection to claim 1 under 35 U.S.C. §102(b) has been traversed and should be withdrawn. The

Applicants further submit that the arguments presented above against the rejection to claim 1 apply equally to the rejection to claim 11. Therefore, Applicants submit that the rejection to claim 11 has also been traversed and should be withdrawn.

Regarding claims 2 and 12, the Examiner argued that Kurtz teaches a pressure transducer diaphragm 21. Regarding claims 6 and 16, the Examiner argued that Kurtz teaches a pressure sensor. Applicants submit that the aforementioned rejections to claims 2, 12 and 6, 16 are rendered moot in light of the fact that Kurtz does not teach all of the features and limitations of Applicants' claims 1 and 11 as indicated above. Based on the foregoing, the Applicants submit that the rejection to claims 1, 2, 6, 11, 12 and 16 under 35 U.S.C. § 102 as being anticipated by Kurtz has been traversed and should be withdrawn.

III. Claim Rejections Under 35 U.S.C. §103

Requirements for Prima Facie Obviousness

The obligation of the Examiner to go forward and produce reasoning and evidence in support of obviousness under 35 U.S.C. §103 is clearly defined at M.P.E.P. §2142:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

M.P.E.P. §2143 sets out the three basic criteria that a patent examiner must satisfy to establish a *prima facie* case of obviousness necessary for establishing a rejection to a claim under 35 U.S.C. §103:

1. some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
2. a reasonable expectation of success; and
3. the teaching or suggestion of all the claim limitations by the prior art reference (or references when combined).

It follows that in the absence of such a *prima facie* showing of obviousness under 35 U.S.C. §103 by the examiner (assuming there are no objections or other grounds for rejection), an Applicant is entitled to grant of a patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443 (Fed. Cir. 1992).

Thus, in order to support an obviousness rejection under 35 U.S.C. §103, the Examiner is obliged to produce evidence compelling a conclusion that each of the three aforementioned basic criteria has been met.

Kurtz

Claims 3-5, 13-16, 8, 9, 18 and 19 were rejected by Examiner under 35 U.S.C. §103(a) as being unpatentable over Kurtz.

Regarding claims 3-5 and 13-16, the Examiner argued that Kurtz teaches silicon 14 and a pressure sensor, but admitted that Kurtz does not explicitly quartz, ceramic, or a SAW pressure sensor. The Examiner argued, however, that lacking any criticality it would have been obvious to one having skill in the art of pressure transducers at the time the invention was made to modify Kurtz with ceramic, quartz or a SAW pressure sensor since it has been held to be within the general skill of a worker in the art to select a material on the basis of its suitability and intended use. The Examiner asserted that in this particular case, it would have been obvious

to select the most feasible material readily available to the manufacturer after undo experimentation for the purpose of creating a pressure transducer that operates at optimum performance.

Regarding claims 8, 18 and 9, 19, the Examiner admitted that Kurtz does explicitly show how the cover and base are bonded (welded or soldered). The Examiner argued, however that lacking any criticality, it would have been obvious to one having ordinary skill in the art of manufacturing pressure sensor to use the most feasible bonding technique readily available to the users through undo experimentation for the purposes of mating to elements.

The Applicants respectfully disagree with this assessment and submit that the arguments presented above with respect to the rejection to claims 1, 2, 6, 11, 12 and 16 under 35 U.S.C. § 102 as being anticipated by Kurtz apply equally to the rejection to claims 3-5, 13-16, 8, 9, 18 and 19 under 35 U.S.C. §103(a) as being unpatentable over Kurtz. Thus, because Kurtz does not teach or suggest all of the claim limitations of Applicants' claims 1, 2, 6, 11, 12 and 16 as indicated earlier, the rejection to claims 3-5, 13-16, 8, 9, 18 and 19 fails under the third prong of the aforementioned *prima facie* obviousness case. Therefore, the Applicants submit that the rejection to claims 3-5, 13-16, 8, 9, 18 and 19 has been traversed and should be withdrawn. The Applicants therefore respectfully request that the rejection to claims 3-5, 13-16, 8, 9, 18 and 19 be withdrawn.

Kurtz in view of Cullen

The Examiner rejected claims 7, 10, 17, and 20 under 35 U.S.C. § 103(a) as being unpatentable over Kurtz in view of Cullen (U.S. Patent No. 4,454,440).

Regarding claim 7, the Examiner argued that Kurtz teaches all the basic features of the claimed invention except a SAW sensor. The Examiner argued, however, that Cullen teaches a SAW sensor 16, 18. The Examiner therefore asserted that it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sensor taught by Kurtz with a SAW as taught by Cullen for the purpose of detecting pressure characteristics more efficiently.

The Applicants respectfully disagree with this assessment and submit that the arguments presented above with respect to the rejection to claims 1, 2, 6, 11, 12 and 16 under 35 U.S.C. § 102 as being anticipated by Kurtz apply equally to the rejection to claims 7, 10, 17, and 20 under 35 U.S.C. §103(a) as being unpatentable over Kurtz in view of Cullen. Thus, because Kurtz does not teach or suggest all of the claim limitations of Applicants' claims 1, 2, 6, 11, 12 and 16 as indicated earlier, the rejection to claims 7, 10, 17, and 20 fails under the third prong of the aforementioned *prima facie* obviousness case. Therefore, the Applicants submit that the rejection to claims 7, 10, 17, and 20 has been traversed and should be withdrawn. The Applicants therefore respectfully request that the rejection to claims 7, 10, 17, and 20 be withdrawn.

IV. Conclusion

In view of the foregoing discussion, the Applicant has responded to each and every rejection of the Official Action. The Applicant has clarified the structural distinctions of the present invention by amendments herein. The foregoing discussion and amendments do not present new issues for consideration and no new search is necessitated. Such amendments are supported by the specification and do not constitute new matter. Accordingly, Applicant respectfully requests

reconsideration and withdrawal of the rejections under 35 U.S.C. §103, and further examination of the present application.

Should there be any outstanding matters that need to be resolved in the present application; the Examiner is respectfully requested to contact the undersigned representative to conduct an interview in an effort to expedite prosecution in connection with the present application.

Respectfully submitted,



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Tel. (505) 314-1312
Fax. (505) 314-1307

Kermit Lopez
Attorney for Applicants
Registration No. 41,953
ORTIZ & LOPEZ, PLLC
P.O. Box 4484
Albuquerque, NM 87196-4484